

**Burnett County Aquatic Invasive Species Education and Prevention
Burnett County Land and Water Conservation Department
February 1, 2005**

Project Area.

Burnett County is an area of beautiful lakes, rivers, and forests - mostly in the Northwest Sands Ecosystem. There are over 31,753 acres of surface water with over 500 lakes. Over two-thirds of the lakes are seepage lakes with no inlet or outlet stream. Big McKenzie Lake, Big Sand Lake, and Sand Lake are designated as Outstanding Resource Waters. Many other lakes have excellent water quality, but are not currently classified.

Seven major rivers cross the county, with a total of 300 miles of rivers and streams. Of this total, 66 miles are trout streams. Class I trout streams are classified as Exceptional Resource Waters. Outstanding Resource Water classification is given to the North and South Forks of the Clam River, the Namekagon River, the St. Croix River, and tributaries to the North and South Forks of the Clam River. The St. Croix and Namekagon are also designated as National Scenic Riverways. The St. Croix River and its tributaries contain an unusually high number and variety of endangered and threatened species.

Tourism and second home development is booming in Burnett County. Recent statistics listed below illustrate this boom, which is influenced by the proximity of the Twin Cities, Minnesota metropolitan area and centered around the county's lakes and rivers.

- **Building permits increased by 200 percent from 1990 to 2000.**
- **Many of these permits are to enlarge small lakeside cabins.**
- **Over half of the homes in Burnett County are second homes.**
- **Summer population is estimated to be three times as high as permanent resident population.**

Problem to be Addressed

The threat for spread of aquatic invasive species is present. Rapid growth of tourism and second home development in Burnett County is influenced by the proximity of the Twin Cities, Minnesota metropolitan area and centers around the county's lakes and rivers.

With Eurasian water milfoil present in many urban Twin Cities lakes, the danger of transporting plant fragments on boats and motors is very real. According to the Minnesota Sea Grant Office:

Eurasian water milfoil can form dense mats of vegetation and crowd out native aquatic plants, clog boat propellers and make water recreation difficult. Eurasian

water milfoil has spread to 75 lakes [in Minnesota], primarily in the Twin Cities area.

This project will help to ensure that control of aquatic invasive species in Burnett County will be an achievable objective. While the county is definitely threatened, invasion of Eurasian water milfoil is not yet widespread. WDNR scientists recently identified Eurasian water milfoil on two very different lakes in Burnett County. Both Ham Lake, a 324-acre seepage lake, and Round Lake, a 204-acre drainage lake that is part of the Trade River system, have Eurasian water milfoil present. The Trade River flows directly into the St. Croix River, a National Scenic Riverway and a state Outstanding Resource Water.

Department of Natural Resource scientists have also found Eurasian water milfoil in the adjacent counties of Washburn (Nancy Lake and the Minong Flowage), Barron (Beaver Dam, Sand, Kidney, Shallow, Duck, and Echo Lakes) and Polk (Long Trade) in Wisconsin.

Goals and Objectives

Goal:

Prevent the introduction and spread of aquatic invasive species in Burnett County lakes and rivers.

Objectives:

- 1. Monitor for the presence of Eurasian water milfoil, purple loosestrife, and other aquatic invasives in Burnett County, Wisconsin.**
- 2. Educate residents and visitors regarding the identification, threats, and control of aquatic invasive species.**
- 3. Cooperate with private, local, state, and Federal groups to address the threat of aquatic invasives.**
- 4. Inspect water craft at public access points to help prevent accidental spread of invasive species into more lakes and rivers.**
- 5. Develop rapid response for eradication of manageable infestations.**

Work is already underway to identify and control purple loosestrife in areas surrounding waterways in Burnett County. The county has a well-established monitoring program that identifies and tracks locations of purple loosestrife infestations. Beetles (*galerucella californiensis* and *galerucella pusilla*) are reared and released in areas of concentrated infestations and chemical treatment is used for small infestations. Over 100 sites of purple loosestrife infestations are identified in Burnett County. This project will ensure that this important program is continued in 2006 and 2007.

The educational efforts of this project will inform the public regarding the identification and threats of aquatic invasive species. A knowledgeable public will be able to identify threats early and help to contain the spread of these species.

Project Methods and Activities

The Burnett County Land and Water Conservation Department will work together with the National Park Service, the Wisconsin Department of Natural Resources, and local lake and river organizations to complete this project.

The Burnett County Lakes and Rivers Association, an umbrella organization for the 40 individual lake organizations, will serve as the project steering committee. Lake organizations in Burnett County conduct lake monitoring programs, present educational information, and distribute newsletters. The steering committee will review project progress and make recommendations for improvements, promote availability of assistance to their member organizations, and distribute educational information. Existing publications and resources will be used whenever possible.

A high percentage of Burnett County waterfront property owners are seasonal residents who use their waterfront cabins from May through September. The grant project will fund two summer project positions working during this key summer period.

Project Job Responsibilities:

- **Watercraft inspection at public access points on lakes considered high risk for invasion of EWM and other invasive species**
- **In-lake monitoring for EWM and other invasive species.**
- **Public outreach and education events related to invasive species including lake meetings, fishing tournaments, county fairs, and local festivals.**
- **Post "invasive species prevention" signs at boat landings and other public lake access points.**
- **Train local lake residents and others to monitor their own boat landings as part of the WDNR "Clean Boats, Clean Waters" program**
- **Assist in "rapid response" actions to identify and respond to new invasive species infestations reported by the public.**
- **Assist WDNR, National Park Service, and other Federal, state, and local entities in Burnett County with monitoring for aquatic invasive species.**
- **Conduct integrated pest management for purple loosestrife control including beetle rearing and release, and clipping and herbicide application for individual infestations.**

The Burnett County Conservationist will supervise the employees and assist with monitoring and educational efforts.

Aquatic Plant Surveys

Consultants will complete comprehensive whole-lake aquatic plant surveys in lakes susceptible to introduction of Eurasian water milfoil and other aquatic invasives. Lakes near known infestations will be targeted. The Round Lake area is particularly susceptible because Round Lake is a drainage lake connected to Trade Lake and the Trade River. The Trade River flows to the St. Croix River.

Where new infestations are identified, whole-lake surveys may be conducted. Surveys will be conducted according to a grid sampling, point intercept method using GPS equipment and GIS tools to map results. Species composition and distribution data will be collected at randomly identified points.

Partners such as the local lake association will be sought for matching dollars for the aquatic plant surveys. The ultimate objective is for the lake association to take responsibility for aquatic plant management on their lake.

Evaluation

Short-term success will be measured by the successful educational and monitoring contacts. Each will be tracked and reported for grant purposes.

Long-term success will be measured by the successful control and containment of aquatic invasive species. Maps of locations of infestations and monitoring sites will be included in grant reports.

Where known infestations exist, effectiveness of control efforts will be followed with ongoing monitoring. If new infestations are discovered, Burnett County will work with the appropriate lake association to conduct an aquatic plant survey and develop a control plan.

A supervisory committee of County, DNR, and National Park Service staff will work with the steering committee (Burnett County Lakes and Rivers Association) to evaluate the results of this project and make recommendations for further work. The supervisory committee will also guide the efforts of the project positions, with the Burnett County Conservationist as the direct position supervisor.

Products or deliverables

GIS maps with locations of aquatic invasive species in Burnett County (DATA COLLECTED)

Aquatic macrophyte survey results (DATA COLLECTED)

Sites where purple loosestrife control beetles are released (approximate number of beetles) (DATA COLLECTED)

Presentations

Boat landings monitored (dates, staff numbers, hours)

Watercraft inspection results (DATA COLLECTED)

Lakes monitored (DATA COLLECTED)

Invasive species prevention signs posted

Personal contacts

Trained citizen watercraft inspectors

Waterfront packets including invasive species identification and prevention information for new waterfront residents. Packets are distributed to approximately 450 new waterfront residents each year.

Management strategy for prevention and control of invasive aquatic species.

The project will protect 31,000 acres in over 500 inland lakes and 300 miles of rivers and streams. Control of invasive species will protect over 40 rare aquatic plants and animals in Burnett County identified by the Wisconsin Natural Heritage Inventory.

The project will provide information for the development of a county-level long-term prevention and control management strategy for aquatic invasive species.

Itemized Budget (see attached)

Project Timeline

The project will be implemented over a three year time period with most of the work completed in the summers. A project timeline is attached.

Public Access and Public Use of Burnett County Waterbodies

The DNR's Wisconsin Lake Directory lists public access for 134 of the 250 county lakes included in the directory. There are over 500 lakes in Burnett County.

Known Eurasian water milfoil infested waterbodies

Ham Lake has no formal public access. The Wisconsin Lake Directory lists public access to Ham Lake from the town road.

Round Lake (Trade River system) has public access. Code = BR. The Town of Trade Lake closed a previously existing access with limited parking.

Existing and Proposed Partnerships

The project initiates a Eurasian water milfoil monitoring and prevention program after two lake infestations were identified in 2003. This countywide project will be part of larger *efforts* by the Wisconsin Department of Natural Resources and the National Park Service to monitor and control and inform the public about aquatic invasive species in this region. A coordinated countywide *effort* will greatly assist with these larger efforts. The project will expand an established monitoring and control program for purple loosestrife in Burnett County.

The Department of Natural Resources is already helping Burnett County in the prevention of aquatic invasive species. Burnett County sponsored Clean Boats, Clean Water workshops in both 2003 and 2004. These workshops, provided by DNR and the University of Wisconsin Extension, train citizen volunteers to staff boat landings and instruct boaters on where invasive species are most often found on boats and trailers and how to perform watercraft inspections. Volunteers were provided with a handbook, video, invasive species identification cards, and watercraft inspection stickers. Volunteers were solicited from county lake associations.

The DNR Invasive Species Education Specialists cover large areas of Wisconsin with very limited staff time and resources. Assistance on the county and private organization level is needed for this work to be successful.

The National Park Service St. Croix National Scenic Riverway (Riverway) educates visitors about the threats from aquatic invasive species. Zebra mussels are perhaps the most notorious Riverway invaders because they spread rapidly and wreak havoc on river biology, recreation, and industry. Zebra mussels are not yet found in the Burnett County segment of the St. Croix River. There are more than 100 other invasive species along the Riverway. Though most are terrestrial, dozens are aquatic. The Park Service is especially concerned about potentially damaging invaders like purple loosestrife, Eurasian Water Milfoil, and Asian Carp.

The St. Croix National Scenic Riverway has assisted Burnett County in its efforts to control aquatic invasive species since the late 1990s by providing technical assistance and equipment. Since the St. Croix flows across the county before forming the border between Wisconsin and Minnesota, cooperative efforts between Burnett County and the St. Croix National Scenic Riverway are absolutely necessary for control of aquatic invasive species to be successful. All of the land in Burnett County flows to the St. Croix River.

Existing plans or management efforts (how is project consist with these)

A Burnett County Long Range Plan objective is to promote public and private efforts to protect critical habitats for plant and animal life.

Invasive aquatic species prevention through education is a top priority of the Burnett County Land and Water Plan as shown in the goal, objective, and activities below.

Goal

Protect native aquatic, nearshore, and shoreline plants and habitats; and restore shoreline buffer zones.

Objective

Minimize the spread of purple loosestrife and other problem exotics.

Plan activities under this objective

Monitor existing aquatic plant beds

Track purple loosestrife/zebra mussel/Eurasian Water Milfoil infestations

Exotics education and eradication program

Purple loosestrife - identification info, monitor sitings, control techniques

Control of aquatic exotics - identification, boat cleaning, and inspection

The Wisconsin Department of Natural Resources (WDNR) and the St. Croix Partner Basin Team identify the control of invasive species as a high priority issue in the St. Croix Basin Plan.

Recent and imminent introductions of exotic and out ofplace endemic species threaten ecological balance and the very existence of many native species at all trophic levels. The growing list of exotic species and their expanding range may prove to be an insurmountable obstacle to maintain healthy natural aquatic systems.

Plan For Sharing Project Results

Project results will be shared through deliverables previously described including invasive species monitoring maps, boat landing contact sites, and aquatic plant survey reports. A final report (in electronic format) will summarize these results. Newsletter and newspaper articles and presentations to lake and river organizations will report project results to the public.

i. Timetable for implementation of key activities

| Activity | 2005 | | | 2006 | | | 2007 | | | | | |
|-----------------------------|------|------|------|------|------|-----|------|------|------|-----|------|-----|
| | MAY | JUNE | JULY | AUG | SEPT | OCT | MAY | JUNE | JULY | AUG | SEPT | OCT |
| Boat landing contacts | X | X | X | X | | | X | X | X | X | | |
| Watercraft inspections | X | X | X | X | | | X | X | X | X | | |
| Aquatic plant surveys | | X | X | | | | | X | X | | | |
| Loosestrife inventory | | | X | X | | | | | X | X | | |
| P. Loosestrife training | | | X | | | | | | X | | | |
| P. Loosestrife control | | X | X | X | | | | X | X | X | | |
| Mapping | | | | | X | X | | | | | X | X |
| Volunteer training | X | X | | | | | | | | | | |
| Presentations | X | X | X | X | | | X | X | X | X | | |
| Newsletter articles | | | X | | | | | | X | | | |
| Sign posting | X | X | X | X | | | X | X | X | X | | |
| Reporting | | | | | | | | | | | | |
| Steering Committee | | X | | | X | X | | | | | X | X |
| Prevention/Control Strategy | | | | | | | | | | | X | X |

| | Total Cost | Subtotals | Grant Request | Match | Source |
|---------------------------------|-------------|------------|---------------|-------|------------|
| Salaries | | | | | |
| EWM Intern (3 years) | \$22,500.00 | | | | NFWF |
| PL Intern (2 years) | \$12,000.00 | 34500 | | | |
| | | | | | |
| Consulting | | | | | |
| Plant surveys (3@ 3500) | \$10,500.00 | | | | Lake Asc. |
| Prevention and control strategy | \$1,500.00 | 12,000 | | | |
| | | | | | |
| Printing and mailing | | | | | |
| Waterfront packets (2006-7) | | | | | |
| postage | \$1,800.00 | | | | |
| folders | \$510.00 | | | | |
| printing | \$900.00 | | | | |
| BLRA Newsletter | \$1,500.00 | 4710 | | | 1500 BCLRA |
| | | | | | |
| Supplies | | | | | |
| Signs | \$200.00 | | | | |
| Volunteer workshops | \$300.00 | \$500.00 | | | |
| | | | | | |
| Hourly equipment use | | | | | |
| Boat and gas | \$1,500.00 | \$1,500.00 | | | |
| | | | | | |
| Other | | | | | |
| Mileage (21,000 X .375) | \$7,875.00 | \$7,875.00 | | | |
| | \$61,085.00 | 61085 | | | |

Lake Management Planning Grant Program

Rev. 2/05

32

Project Ranking for Subchapter 11 - 33 maximum points

PROJECT NAME: Burnett County AIS Education & Prevention

TOTAL
SCORE

Comments:

PROJECT SPONSOR: Burnett Co. Land and Water Conservation Department

\$ REQUESTED: \$30,542.00

REGION: NOR-S

| | | | | | | |
|------------------------------------|-----------------------------|---|----------------|---|-----------------|---|
| CATEGORY (fill in Xs as needed) | Sociological | X | APM | X | Regional Proj. | X |
| | H ₂ O Monitoring | | Septic | | GIS | X |
| | Watershed | | Comp. Plan | | Pro Development | X |
| | Modeling | | Implem. Design | | Misc | |

| | | | |
|--------------|--|--|---|
| SCORE YES | | Waterbody has adequate public access, or access meets demand. (Yes or No) Yes= Rank and place in priority. No=Project is ineligible | |
| 11 | | A. The degree to which the project includes prevention and control strategy (Score cumulatively; maximum 11 points) | |
| | | POINTS GIVEN | QUESTION |
| | | 1 | 1) The project wil conduct a minimum of 2 educational workshops on aquatic invasive species and prevention methods. The workshops will disseminate information about aquatic invasive species consistent with the Department's statewide education strategy for controlling invasive species. (1 point) |
| | | 1 | 2) The project will monitor, map and report data about the presence or absence of aquatic invasive species. (1 point) |
| | | 1 | 3) The project will train volunteers to identify AIS and conduct surveillance monitoring for early detection. (1 point) |
| | | 3 | 4) Project will produce a detailed plan to control a specific aquatic invasive species and prevent the spread to other waterbodies. The plan will provide a step-by-step process to implement. Examples: A lake-wide treatment plan for an aquatic plant species or a large scale treatment of carp during spawning in shallow bays of a lake. (3 points) |
| | | 3 | 5) The project includes a Clean Boats, Clean Waters watercraft inspection program per the requirements of NR 198.22(1)(d). (1 point per launch--up to a max of 3 points) |
| | | 2 | 6) Project covers multiple lakes (a county-wide, town-wide effort) and multiple management groups. (a chain-of-lakes under one association does not count). (2 points) |
| 4 | | B. The degree to which the project will prevent the spread of aquatic invasive species. (Score 1 or 2 then 3 and 4; maximum of 4 points) | |
| | | POINTS GIVEN | QUESTION |
| | | | 1) AIS is nonexistent in the project location but within 5 miles of an existing infection. (1 point) OR |
| | | 2 | 2) AIS is an isolated infestation where there are no other AIS infestations within 5 miles. (2 points) |
| | | 1 | 3) Project location is in the headwaters of a drainage system, upstream of uninfested waters. (1 point) |
| | | 1 | 4) Project location has multiple AIS and is likely a major source for spread; i.e., high public use. (1 point) |
| 2 | | C. The degree to which the project protects or improves the aquatic ecosystem's diversity, ecological stability or recreational uses. (Score cumulatively maximum 3 points) | |
| | | POINTS GIVEN | QUESTION |
| | | 1 | 1) Project will produce proposed local ordinance language or lake rules to a) protect critical spawning beds; b) protect native plant beds and c) prevent disturbance/spread of non-native plant beds by implementing boating restrictions. (1 point) |
| | | | 2) Project will develop a plan for reintroduction of native plant species or stocking of native animal species. (1 point) |

| | | |
|---|---|--|
| | 1 | 3) Waterbody(s) has a high degree of native biodiversity, as expressed by an above state average aquatic or wetland plant FQI, the presence of a listed aquatic species or is an ERW or ORW water. (1 point) |
| 2 | <i>D. The stage of the infestation in the water body. (If the project isn't focused on a specific Waterbody consider the general level of infestation in the waters covered by the project)</i> | |
| | Maximum points: 2 | |
| | POINTS GIVEN | QUESTION |
| | 2 | 1) Project is addressing an invasive species that is a pioneer infestation (as defined by 198.12 (6)) in the waterbody or waterbodies in the study or is a follow-up to a rapid response project. (2 points) OR 2) Project is studying an invasive species that is an established infestation in the waterbody or waterbodies in the study. (1 point) |
| 4 | <i>E. The degree to which the project will be likely to result in successful long-term control. (Score cumulatively, maximum of 4 points)</i> | |
| | POINTS GIVEN | QUESTION |
| | 1 | 1) Project creates a partnership between a unit of government and one of the following: lake association, school, youth organization or lake district. (1 point) |
| | 2 | 2) Project is a partnership between the applicant and a local unit of government or a non-profit organization. The project will be jointly studied or implemented by both. (2 points) |
| | 1 | 3) Includes development of a long range and diverse (not just AIS grants) funding strategy. (1 point) |
| 2 | <i>F. The availability of public access to, and public use of, the waterbody. (Score either 1 or 2 and then 3; maximum of 2 points)</i> | |
| | POINTS GIVEN | QUESTION |
| | 1 | 1) The waterbody has more than the minimum, but less than the maximum public boating access as defined in NR 1.01 (4) (5) or (6). (1 point) OR |
| | | 2) Wetland is in public ownership and has public road right-of-way access (1 point) |
| | 1 | 3) The waterbody is a heavily used public destination expressed with significant other public access opportunities such as swimming beaches, park lands, public piers, multiple resorts, etc. (1 point) |
| 3 | <i>G. The degree to which the proposed project complements other management efforts. (Score cumulatively; maximum of 3 points)</i> | |
| | POINTS GIVEN | QUESTION |
| | 1 | 1) The project is specifically recommended in a plan other than the sponsor's (county land and water resource plan, local comprehensive plan, other non-state plan). (1 point) |
| | 2 | 2) Another eligible management unit for the project waterbody (other than the applicant) is currently implementing an AIS prevention strategy. (2 points) |
| 3 | <i>H. Community support and commitment, including past efforts to control aquatic invasive species. (Score cumulatively; maximum of 3 points)</i> | |
| | POINTS GIVEN | QUESTION |
| | 2 | 1) The project has the written support from additional management units, interest groups or organizations committing significant financial support >10% to the total project costs). (2 points) |
| | 1 | 2) Sponsor or other stakeholders(s) on the waterbody or waterbodies have used control methods in the last 5 years to target the aquatic invasive species being studied by the project proposal. (1 point) |
| | | |
| 1 | <i>I. Whether the sponsor has previously received a grant for a similar project for the same waterbody.</i> | |
| | 1 | 1) The sponsor has not previously received an AIS grant for this waterbody(s) (1 point) |